MAINE HEALTH ALERT NETWORK



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ADVISORY

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TO: All HAN Recipients

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STAY HEALTHY THIS WINTER Maine CDC/DHHS 2008-2009

The Problem

The heating and economic crises can have a significant impact on Mainers' health. A recent survey found that 10% of Maine households report not having sufficient funds to heat their homes this winter. About 2/3 of Maine households use oil as a primary source for heating their homes, with Mainers having one of the highest dependencies on oil heat in the nation. Mainers report a number of planned energy and monetary conservation strategies such as supplementing with wood heat and electric space heaters, turning down the thermostat and water heater, buying fewer groceries and other necessities such as medicines.

Three related public health issues are addressed in this health advisory: hypothermia, respiratory health with wood burning, and carbon monoxide.

Recommendations

- Review and use the three fact sheets below on hypothermia, respiratory health with wood burning, and carbon monoxide. More information as well as downloadable and printable copies of the fact sheets can be obtained at Maine CDC/DHHS' Stay Healthy This Winter Website: http://www.maine.gov/dhhs/boh/heat 2008.shtml.
- For those who are doing statewide or local (district) planning related to heat and energy, the Maine CDC/DHHS American Lung Association's October 2008 Residential Heating and Energy Survey of 32,000 Mainers can be viewed and downloaded at http://www.maine.gov/dhhs/boh/heat 2008.shtml.
- For other important information related to the heating crisis and especially about assistance for those in need, contact:

 - o 211 Maine http://www.211maine.org/.

STAY WARM – PREVENT HYPOTHERMIA

The Problem of Hypothermia

- With many needing to keep the heat turned down this winter, people may be at risk for cold body temperature, also known as hypothermia.
- About 750 deaths occur due to hypothermia every year in the U.S.
- An average of 20 Mainers die every year due to hypothermia, including about 3-4 who die in their homes.
- High risk populations include people who:
 - Are >60 years of age, who account for more than half of all hypothermia deaths (they do not shiver or constrict peripheral blood vessels as well and have lower metabolic rates)
 - o Are infants (babies under 1 year of age)
 - Have hypothyroidism
 - Drink or abuse alcohol (alcohol results in vasodilation, a relaxation of blood vessels causing heat loss)
 - Have a mental illness

- o Are homeless, poor, and/or live alone
- Take sedative hypnotics (such as benzodiazepines, chloral hydrate, antihistamines such as diphenhydramine=Benadryl)
- Take neuroleptic medications (also known as antipsychotics, and include phenothiazines, haloperidol, loxapine, clozapine, zyprexa), which induce vasodilation and reduce shivering responses.

What You Can Do to Prevent Hypothermia

- Dress in layers.
- Wear a warm hat -30% of heat loss is through the head.
- Wear a scarf and gloves.
- Infants should be in a room in which the temperature is 61-68 degrees Fahrenheit.
- Drink plenty of fluids and warm/hot drinks.
- Eat regular balanced meals to give you energy good nutrition is important.
- Keep active when it's cold, but not to the point where you're sweating.
- Keep dry and change out of wet clothes as soon as possible.
- Cut down on alcohol, caffeine, and nicotine, since all three cause heat loss.
- Try to keep one room in the house warm.
- Ask your doctor if you are on any medications that affect your ability to maintain a steady body temperature (such as neuroleptic medications and sedative hypnotics).
- Symptoms of hypothermia include:
 - o Decreased consciousness, sleepiness, confusion, and/or disorientation
 - o Someone who is mildly hypothermic may not take action to warm themselves
 - o Shivering, pale or blue skin, numbness, poor coordination, slurred speech
 - o In severe hypothermia, shivering decreases or goes away, and the person becomes unconscious and has very shallow breaths.

FMI on Hypothermia

Maine CDC/DHHS' Stay Healthy This Winter Website

http://www.maine.gov/dhhs/boh/heat 2008.shtml

Maine Governor's Stay Safe and Warm Website

http://www.maine.gov/governor/baldacci/contact/citizen_services/safeandwarm.html

211 Maine

http://www.211maine.org/

US CDC Review Article on Hypothermia Prevention

http://www.cdc.gov/mmwR/preview/mmwrhtml/00001319.htm

WOOD BURNING AND LUNG HEALTH BURN IT SMART AND HEALTHY

The Problem of Wood Burning and Lung Health

- 1 in 3 Maine households have someone living there with asthma, another chronic lung disease, or chronic heart disease. These are households who more commonly report having trouble heating their homes.
- Maine has the highest childhood and adult asthma rates in the country. 10% of adults and 12% of children in Maine have asthma.
- Wood is a renewable source of heat. It has some benefits over non-renewable fossil fuels such as oil.

- However, smoke from wood burning can cause air pollution and public health problems. It can cause or make worse asthma, chronic obstructive pulmonary disease, and heart disease. It affects children and the elderly more than others.
- Half of Maine households heat with at least some wood.
- Maine homes with an asthmatic child are more likely to have difficulty paying for heat and are more likely to be heating with wood.
- 1 in 3 Maine wood stove owners report their wood stove is >20 years of age, ie older than the EPA cleaner standards.
- Heating with wood is less prevalent and heating with oil is most prevalent in York and Cumberland. Heating with wood, especially pellets, is most common in Aroostook.
- 1 in 7 Maine households allow people to smoke tobacco in their home.

What You Can Do To Improve Air Quality For Breathing While Heating With Wood

- Weatherize your home, such as closing up areas that will let heat escape.
- Have your chimney, flue, and woodstove inspected and cleaned at least once per year.
- Use wood pellets. They burn 25-50% cleaner than cord wood.
- Replace an old woodstove, fireplace, or fireplace insert (built before the late 1980s) with a newer more efficient EPA-certified equipment that uses less wood and burns up to 90% cleaner.
- If using cord wood, burn hardwoods that are clean, dry, and seasoned (>6 months) because they burn cleaner and are less likely to pollute the air.
- Never burn garbage, trash, plastics, styrofoam, paints, painted wood, salt water wood, cleaning chemicals such as solvents, charcoal/coal, or treated woods (treated with varnishes, sealants, or pressure-treated). These substances can result in toxins being burned and released into the air.
- Burn small hot fires. They produce less smoke than those that are left to smolder.
- Split wood into 4-6 inch pieces. Fires burn cleaner with more surface area exposed to the flame.
- Keep your home tobacco smoke free.

FMI on Wood Burning and Lung Health

Maine CDC/DHHS' Stay Healthy This Winter Website

http://www.maine.gov/dhhs/boh/heat 2008.shtml

Maine Governor's Stay Safe and Warm Website

http://www.maine.gov/governor/baldacci/contact/citizen_services/safeandwarm.html 211 Maine

http://www.211maine.org/

Maine Department of Conservation's Wood-To-Energy Initiative and Fact Sheets

http://www.maine.gov/doc/initiatives/wood to energy/firewood heat.html

US EPA Reducing Air Pollution from Residential Wood Burning

http://www.epa.gov/air/community/guide/wood stoves comm info.pdf

Burn It Smart and Healthy – Environment Canada and Health Canada Fact Sheet About Wood Burning

http://www.ec.gc.ca/cleanair-airpur/335DD970-9FFD-4227-B3E0-

54EED667DCAA/Health & Wood heating-En.pdf

Wood Burning Emission Comparisons

http://www.ec.gc.ca/cleanair-airpur/335DD970-9FFD-4227-B3E0-

54EED667DCAA/Emission comparison-En.pdf

http://www.ec.gc.ca/cleanair-airpur/default.asp?lang=En&xml=335DD970-9FFD-4227-B3E0-54EED667DCAA

<u>CARBON MONOXIDE (CO) POISONING:</u> THE SILENT KILLER AND A RISK THIS WINTER

The Problem of CO

- Carbon Monoxide (CO) is an odorless, colorless, tasteless gas and is produced whenever any fuel is burned, including gas, oil, kerosene, coal, charcoal, and wood. People cannot tell that it is present before symptoms are noticed. But, it is deadly and can kill quickly.
- CO is the leading cause of unintentional poisoning in the United States. It kills about 200 people every year. Three-quarters of CO poisoning happen in people's homes, and the most common source is home heating systems.
- These poisonings are caused by leaking or faulty furnaces or heaters, blocked chimneys
 or flues, vehicles left running in an attached garage, charcoal burned inside, and gasoline
 powered generators operated in a home, attached garage, or too close to windows or
 doors
- Half of Maine households do not have a CO monitor. Residents of Cumberland are more likely to have a CO monitor; while residents of Aroostook are least likely to have a CO monitor.
- About 5 Mainers have died in the past several years due to CO poisoning. About 150
 Mainers are hospitalized or seen in the emergency departments every year from CO
 poisoning that is not fire-related and non-intentional. The only official deaths from the
 1998 ice storm were from CO poisoning.

What You Can Do To Prevent CO Poisoning

- Keep a carbon monoxide monitor.
 - Place CO detectors in the hallway near every sleeping area of the home and make sure furniture or curtains do not cover the detector.
 - o Make sure the detector is battery powered or has a battery back-up so it will work when the power is out.
 - o If battery powered, replace batteries at least once per year.
 - o Purchase one with the Underwriter's Laboratory "UL" mark.
- Place generators <u>outdoors</u> in a well ventilated location.
 - o Generators should be placed well away from home windows or doors.
 - Generators should not be placed in an enclosed or semi-enclosed space (such as basement, cellar bulkhead, attached garage) where carbon monoxide can build up to dangerous levels.
- Use kerosene heaters in a well ventilated room.
 - Keep doors to other rooms open and keep a window partially open (at least 1 inch).
 - Use only K-1 grade fuel in kerosene heaters.
 - o Follow instructions for setting the wick height.
- Do not use outdoor cooking devices indoors.
 - o Examples include gas or charcoal grills or gas camp stoves.
 - o Do not use this equipment in a garage, vehicle, or tent.
- Do not use indoor gas cooking stoves or ovens or clothes dryers for heat.

- Keep chimney flue and a window open when burning decorative gas fireplace logs as a heat source.
- **Inspect and clean heating system** every year (including chimneys and vents).
- Never leave a car running in an attached garage, even with the garage door open.
- **Symptoms of CO poisoning** include flu-like symptoms such as headache, nausea, feeling tired, vomiting, dizziness, and shortness of breath. CO does not cause a fever.
 - People who have heart or lung disease may notice these symptoms are worse.
 For instance, those with heart disease will often feel more chest pain as a result of high CO levels.
 - o At higher or prolonged levels of CO, symptoms include disorientation, sleepiness, unconsciousness, and death.
- If the CO detector sounds an alarm, go outside immediately to breathe fresh air and call 911.

FMI on CO

Maine CDC/DHHS' Stay Healthy This Winter Website

http://www.maine.gov/dhhs/boh/heat 2008.shtml

Maine Governor's Stay Safe and Warm Website

http://www.maine.gov/governor/baldacci/contact/citizen_services/safeandwarm.html

Maine CDC/DHHS Carbon Monoxide Website

http://www.maine.gov/dhhs/eohp/air/co.htm

211 Maine

http://www.211maine.org/

US CDC Carbon Monoxide Information Page

http://www.cdc.gov/co/Default.htm

US CDC Carbon Monoxide PSA Scripts

http://www.cdc.gov/co/psa.htm

Consumer Product Safety Commission Carbon Monoxide FAQ

http://www.cpsc.gov/cpscpub/pubs/466.html

American Lung Association Carbon Monoxide Fact Sheet

http://www.lungusa.org/site/c.dvLUK9O0E/b.4061173/apps/s/content.asp?ct=67136